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GOLDEN EGGS

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With caviar fetching up to \$6,000 a kilogram and wild stock on the wane, Cornel Ceapa believes his sturgeon farm will one day hatch big profits. And he's prepared to wait...and wait

Denis Seguin

Dressed against the New Brunswick winter, Dr. Cornel Ceapa is leaning over a tank 3 1/2 metres across and filled with grey-green water. The reflective surface betrays no sign of life until the still is broken by an eddy. Ceapa, who looks older and more distinguished than most men of 43, tosses in a handful of dry food pellets. Nothing happens - no piranha-like thrashing. "Sturgeon are picky eaters," says Ceapa, his native Romanian inflecting the rhythm of his speech. "They don't rush around like salmon or trout." Sturgeon, he says, are bottom feeders; they like to check out their food before they eat it.

In this and another 32 tanks in a small warehouse near Carters Point, 30 kilometres from Saint John, are some 7,000 short-nose sturgeon. On another rented property are an additional 3,000 Atlantic sturgeon, maturing in the so-called grow-out. These are the eldest of Ceapa's progeny - four-year-olds, the largest of them just over a metre long. The president of Acadian Sturgeon and Caviar is waiting for these females to spawn the eggs he hopes will make his fortune.

Caviar: The very word conjures visions of luxury and excess - excess of cash, in particular. Depending on the type - beluga, osetra, sevruga - and the provenance, a kilo of caviar retails for between \$1,700 and \$6,000. Since one Atlantic sturgeon can yield as much as 50 kilograms of eggs in one season, it's small wonder Canadian aquaculture is seeing a gold rush. Ceapa's small operation is just one of the players vying to fill the demand.

But there's one big problem: Sturgeon farmers like Ceapa have to wait - and wait and wait - to start harvesting eggs, since it's difficult to determine the gender of a

sturgeon before its fourth year. And the fish that prove to be female won't begin spawning - in other words, laying those lucrative eggs - for at least another five years (far longer in the wild). That's if the process isn't delayed by genetic or environmental factors. In the meantime, the fish need to be fed and housed in increasingly larger tanks (a full-grown Atlantic sturgeon can weigh up to hundreds of kilograms). "Sturgeon are endangered by their very biology," says Ceapa. "They mature late and they live long. A fish that matures in one year has a better chance of perpetuating the species."

Further, while many aquaculture species can spawn three times in one year, sturgeon females only spawn every second year. And when the grey-black eggs are ready for harvesting, you'd better have a ready market, because they are perishable. Sealed and refrigerated, they can keep for three or four months; once exposed to air, they keep for only a few days.

Ceapa is unconcerned. He has a plan: Start small and build slowly.

Sturgeon are one of nature's more complicated beasts, and Ceapa has devoted the greater part of his life to studying them. As a biology student at Romania's Lower Danube University, he watched the river's sturgeon stock dwindle, the victims of overfishing and pollution. The story was writ large in the Caspian Sea, home of the huso huso sturgeon, bearer of the storied beluga caviar, which have since been overfished into near extinction. Thus was spawned Ceapa's doctoral thesis, co-sponsored by the Université Bordeaux I: "Sturgeon biology and management on the Danube River." All this to say, Ceapa knows his sturgeon. PhD in hand, Ceapa immigrated to Canada in 2003 with his wife, Dorina, and their son, Michael, seeking a better life and, of course, sturgeon. "I knew where the sturgeon were in Canada," Ceapa says, "so it was East Coast or West Coast." The East won out when he landed a position as a research assistant at the University of New Brunswick, at a salary of \$20,000. Caviar wasn't on the Ceapa household's menu, but it did lead to post-doctoral research supported by the Natural Sciences and Engineering Research Council of Canada, with Ceapa

liaising between the UNB and Gray's Aqua Farms, a local salmon grower looking to diversify into sturgeon.

But in 2005, Gray's owners got cold feet: With farm-raised salmon booming, they decided they couldn't wait for the sturgeon. They gave their research biologist the bad news: They were shutting down their operation. For Ceapa, two years into his life in Canada, with no credit history, it was a defining moment: "I had an option. I knew a fisherman that had some land and could accommodate a fish farm. Do I continue work at the university or start my own business?" Ceapa found a buyer in North Carolina who was interested in the experimental farm's stock of aquacultured live fish. An early indicator of Ceapa's business savvy: He raised the money to buy Gray's sturgeon infrastructure by persuading the Carolinians to pay half up front. That \$25,000 advance and a \$75,000 small-business loan from a local bank, plus the sturgeon he held in reserve, put Ceapa in the driver's seat. "I am the principal financier," he says proudly.

Acadian is literally a mom-and-pop operation. At its busiest, during summer spawning - when selected fish are harvested not just for their eggs but also for their flesh - the firm employs five, not including Ceapa and his wife and son. During the low season, it's just the Ceapa family and two technicians. Michael Ceapa is a multitasker, handling everything from smoking and packaging the sturgeon meat to IT and website design. Dorina, who salts and mixes the eggs into caviar, also does the books. When he isn't caring for his property or conducting Caesarian sections on 100-kilogram fish, Ceapa is helping his hired fishermen pull up the nets on their boat.

Ceapa relies on wild-caught Atlantic sturgeon - measuring up to 2 3/4 metres long - to stay afloat while he watches his farmed fish mature. A permit from Fisheries and Oceans Canada allows him to catch up to 300 of the fish a year; as part of the deal, he measures, tags and releases half of what he brings in. "We could hire people to do what we do, but we prefer to be on the boat," says Ceapa. The fish he takes, he harvests for caviar and meat. Both are packaged in-house, certified by the Canadian Food Inspection Agency, and then Fedexed

in Styrofoam boxes and frozen gel packs to online customers, distributors, retail outlets and restaurants from St. John's to Vancouver. Toronto is his No. 1 market - a 30-gram tin of his wild-caught caviar, served with crème fraîche, will set you back \$65 at Oyster Boy on Toronto's Queen Street West.

Ceapa also generates revenue selling aquaculture stock, from 60 mature, wild-caught brood sturgeon. The company ships fertilized eggs and smolts (recently hatched fish) to sturgeon farms in Taiwan and China, where the meat is widely consumed. Last year, one shipment of 200,000 larvae travelled, via regular air cargo, door-to-door in 48 hours. Acadian also sells fish for restocking in regions where sturgeon have been extirpated (the short-nose is genetically similar to sturgeon that once inhabited the Baltic Sea before they disappeared due to overfishing). And the company has a small sideline selling live fish to researchers and aquariums. All told, Acadian had 2010 revenue of \$350,000. Ceapa is projecting revenue of \$600,000 for 2011.

It's not big money, but that's part of Ceapa's strategy. "We grow our cash flow as we grow the business," he says. He has also grown his shareholders, who own about 20% of Acadian. One of them is his neighbour, the owner of an industrial plumbing company. Given Acadian's many tanks, metres of pipes and feeder tubes, and myriad pumps for well-water, plus his proprietary recirculation and heating system, "you can imagine how useful that's been," says Ceapa. This neighbour also lends him a front-end loader, a useful tool for carrying giant fish from the operating theatre to the recovery pool. The other shareholder is Ceapa's former PhD supervisor at Bordeaux I, Dr. Patrick Williot, an expert on sturgeon aquaculture in France.

Ceapa also acts as the company's front man. At a fundraiser at Toronto's Evergreen Brickworks last October, for instance, Ceapa was building word-of-mouth by the spoonful, spreading his wild-caught caviar onto crackers and passing around skewers of sturgeon ceviche (raw fish marinated in citrus juice). A few months before that, he was in South Korea, spreading the word about the aquarium fish business. "I'm hands-on, but I wear different hats," he says. "I can

put on a tie and represent an exclusive product. But when it's time to pull in a net, I get in there."

But Ceapa has competition, and they, too, play the patience game. In March, for instance, after 11 years of aquaculture, Target Marine Products in Sechelt, B.C., began harvesting its first yield of white sturgeon caviar from 100 fish (sold under the name Northern Divine); the firm has nearly 2,000 mature females. There are also cautionary tales, like Supreme Sturgeon and Caviar of New Brunswick, whose main investor was the federal government's Atlantic Canada Opportunities Agency. ACOA invested nearly \$3.6 million into Supreme over a dozen years, only to see the company enter receivership in 2010. In August, 2010, the company's assets, fish included, were acquired by a group of investors and renamed Breviro Caviar. This year, Breviro is anticipating its first harvest of short-nose sturgeon caviar - the same product that Cornel Ceapa is four years away from netting.

There's a lot more competition abroad. Experiments at the University of California at Davis in the mid-1980s led to the first sturgeon farms in North America resulting in thriving California businesses like Petrossian Caviar, which sells a highly regarded osetra-style caviar. France, Italy, Uruguay, Israel, Russia, Iran, China: All have sturgeon aquaculture operations, all of them targeting a gap between supply and demand created after a 2006 ruling by the United Nations' Convention on International Trade in Endangered Species limited the export of Caspian Sea sturgeon. In the United Arab Emirates, the Bin Salem Group and Germany's United Food Technologies are investing \$80 million (U.S.) in a sturgeon farm.

Asked if he fears falling behind in light of the pending harvests at Target and Breviro, Ceapa says, "I don't worry about the competition. We have our own clients, our own distribution channels. They have to build them. It took us three years to get where we are. There is room for everyone. Canada has 35 million people. Target says they have 100 females. That's a maximum of 200 kilos of caviar. That's not going to overflow the market."

Ceapa has 1,000 friends on Facebook, most of them chefs, restaurant owners and other specialty food buyers whom he wants to "like" him. No doubt caviar adds that certain air of sophistication to any menu, but, thus far, Ceapa's social media efforts have convinced only 10 restaurants to put it on theirs. As for private consumers, his nutritional pitch is compelling: Caviar is one of the healthiest gourmet choices out there, brimming with omega-3s ("reduces the risk of anxiety, depression and Alzheimer's") and packed with vitamins and minerals ("especially important for pregnant women, children and the elderly").

But around a table of eight urban sophisticates at Oyster Boy, only three had ever tried genuine sturgeon caviar, and no one had purchased it. Along with the sturgeon ceviche, that \$65 tin of Acadian caviar was passed around. The server said the restaurant only sells a few tins each week - surely a case of price trumping curiosity. This may be the greater challenge facing sturgeon aquaculture here in Canada: an absence of caviar culture.

Indeed, the qualities that make Canadian foodies such a prime target for specialty food purveyors like Ceapa - concerns for the environment and sustainability - work against caviar marketers, who must overcome the negative publicity: the environmental catastrophe of the Caspian Sea, the endangered state of the fish. Sturgeon aquaculture may be sustainable, but spreading the word, along with the caviar, is another story.

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